

a rear glass substrate disposed opposite said front glass substrate, said rear glass substrate having second electrodes over which a second dielectric layer is formed, the second electrodes not being parallel with the first electrodes;

a seal connecting corresponding edges of said front and rear glass substrates;

partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate, an outermost one of the partitions extending to said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal; and

a fluorescent substance coated between each adjacent pair of said partitions.

A2
cont

REMARKS

INTRODUCTION:

In accordance with the foregoing, the specification and title have been amended to improve form and to correct apparent typographical errors, claims 14 and 29-36 have been canceled without prejudice or disclaimer, and claims 1-5, 15, 17, 19, 28, and 37 have been amended.

No new matter is being presented, and approval and entry of the foregoing amendments are respectfully requested.

Claims 1-13, 15-28, and 37 are pending and under consideration. Reconsideration is requested.

OBJECTIONS TO THE DRAWINGS:

In the Office Action at page 2, the Examiner objects to the drawings as not showing a gas removal channel as recited in claim 23. By way of review, claim 23 recites that "said non-light emitting zone filling portion and the first dielectric layer define a gas removal channel through which gas is removed from the plasma display panel." In the embodiments of the invention shown in FIGs. 5 and 6B and discussed in paragraphs 38 and 43, an empty space 52, 64 is defined by a non-light emitting zone filling portion 51, 63 and a dielectric layer 14. The empty space 52, 64 is used in the exhaustion of gas. As such, it is respectfully submitted that the embodiments of the invention found in FIGs. 5 and 6B show the features more broadly set forth in claim 23.

Reconsideration and withdrawal of the outstanding objections to the drawings are respectfully requested.

OBJECTION TO THE TITLE:

In the Office Action at page 2, the Examiner objects to the title as not being descriptive. In view of the proposed amended title set forth above, the outstanding objection to the title should be resolved.

CHANGES TO THE SPECIFICATION:

Changes have been made to the specification only to place it in preferred and better U.S. form for issuance and to correct apparent typographical errors. No new matter has been added.

OBJECTION TO THE CLAIMS:

On page 3 of the Office Action, the Examiner objects to claim 27 since the Examiner believes claim 27 should depend from claim 24 instead of claim 23 since the seal is recited in claim 24 and not in claim 23. As a point of clarification, claim 23 depends from claim 15. Claim 15 recites, among other features, "a seal connecting corresponding edges of said front and rear substrates." As such, it is respectfully requested that the Examiner reconsider the objection as the seal is recited in a claim from which claim 27 depends.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action at page 3, the Examiner rejects claim 2 under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is respectfully traversed and reconsideration is requested.

The Examiner asserts that the phrase "substantially formed integrally" is indefinite. However, as noted by MPEP 2173.05(b)(D), the term "substantially" has been repeatedly found to be definite in view of the general guidelines contained in the specification. Further, it is noted that the term "substantially" has an ordinary meaning. WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY, p. 1176 (Merriam-Webster Inc. 1986) (substantially defined to mean "being largely but not wholly that which is specified.") Further, while the term substantially is broad, breadth in itself is not indefiniteness. MPEP 2173.04. Therefore, unless there is evidence that one of ordinary skill in the art would be unable to ascertain the metes and bounds of the term "substantially," it is respectfully submitted that claim 2 remains in compliance with 35 U.S.C. §112, second paragraph.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action at pages 3-5, the Examiner rejects claims 1, 4, 7, 15-18, and 28 under 35 U.S.C. §102(e) in view of Nakano et al. (U.S. Patent No. 6,414,434). The rejection is respectfully traversed and reconsideration is requested.

By way of review, claim 1 recites, among other features, "partitions formed on an upper

surface of said dielectric layer of said rear glass substrate and extending lengthwise in a first direction." Claim 1 further recites a "non-light emitting zone portion comprising a material used for one of said partitions and having terminal ends defining a length in the first direction which is substantially a length of the outermost partition in the first direction." As such, claim 1 has, among other benefits, a zone portion which prevents unnecessary arc discharge occurring at the end of the electrodes.

In contrast, as shown in FIG. 2 of Nakano et al., a second partition wall 11 extends well beyond a length of each partition wall 6. Instead, the second partition wall 11 is disclosed as encircling all of the partition walls 6 so as to restrain impure gasses left in or absorbed by the sealing layer 10. (Col. 4, lines 39-43). As such, the disclosed walls 6, 11 appear to be largely structural and are not disclosed as preventing arc discharge at ends of the line X, Y electrodes. Therefore, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claim 1.

Additionally, the Examiner asserts that the second partition wall 11 covers end portions of line electrodes X,Y so as to disclose the invention recited in claim 4. By way of review, Nakano et al. discloses the line electrodes X, Y extending well outside of the second partition wall 11. As is seen in FIG. 1, the ends of the line electrodes X, Y, extend to edges of a glass substrate 1. There is no disclosure that the ends of the line electrodes X, Y are covered by the second partition wall 11. In contrast, claim 4 recites, among other features, that "said non-light emitting zone filling portion covers *end* portions of said first electrodes formed on the front glass substrate." As such, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claim 4.

For similar reasons, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claim 7.

Also, claim 15 recites, among other features, "a seal connecting corresponding edges of said front and rear glass substrates," "partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate," "and "a non-light emitting zone filling portion disposed between an outermost one of said partitions and said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal." Claim 15 further recites that "said seal is disposed such that at least one of opposing ends of each of the first electrodes is disposed between said seal and said partitions."

In contrast, Nakano et al. discloses the line electrodes X, Y extending well outside of the second partition wall 11 and beyond the seal 10. As is seen in FIG. 1, the ends of the line

electrodes X, Y extend to edges of a glass substrate 1 and are not shown being covered by the second partition wall 11 or by the seal 10. As such, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claim 15.

Further, the Examiner asserts on page 5 of the Office Action that Nakano et al. discloses that the second partition wall 11 fills the space between the outermost partition and the seal as recited in claim 17. However, as shown in FIG. 2, Nakano et al. discloses a space between the second partition wall 11 and the seal 10, and another space between the partition walls 6 and the second partition wall 11. There is no disclosure that the second partition wall 11 contacts one of the partition walls 6, or that the second partition wall 11 fills the space between the second partition wall 11 and the seal 10.

In contrast, claim 17 recites, among other features, that "said non-light emitting zone filling portion *is connected to* and has a same height as said outermost partition." Further, claim 18 recites that "said non-light emitting zone filling portion *fills the space between said outermost partition and said seal.*" As such, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claims 17 and 18.

On page 5 of the Office Action, the Examiner asserts that Nakano et al. discloses disposing an inert gas within the plasma display panel as recited in claim 28. By way of review, claim 28 recites, among other features, "an inert gas disposed within the plasma display panel *except between the space defined between said outermost partition and said seal.*" In contrast, FIG. 2 of Nakano et al. shows a continuous space between the partition walls 6, the second partition wall 11, and the seal 10 such that gas can move within this entire interior space. In this way, the interior space can be evacuated using the sealing hole 12 prior to the insertion of the inert gas. (Col. 3, lines 48-53, col. 4, lines 32-39). As such, the inert gas would be in the space between the second partition wall 11 and the seal 10. Therefore, it is respectfully submitted that Nakano et al. does not disclose the invention recited in claim 28.

Claim 16 is deemed patentable due at least to its depending from claim 15.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action at pages 6-10, the Examiner rejects claims 2, 3, 5, 6, 8-13, and 19-27 under 35 U.S.C. §103 in view of Nakano et al. and the Examiner's assertions as to matters of routine skill in the art. The rejection is respectfully traversed and reconsideration is requested.

On page 6 of the Office Action, the Examiner asserts that the formation of the outermost partition and the non-light emitting zone filling portion as one piece involves only routine skill in the art. Even assuming arguendo that the Examiner is correct as to the routine skill in the art, it

is noted that Nakano et al. discloses a space between the partition walls 6 and the second partition wall 11 as shown in FIG. 2. This space is used to evacuate gas using the exhaust hole 12. As such, Nakano et al. does not disclose that one of the partition walls 6 even contacts the second partition wall 11.

Additionally, it is unclear that satisfactory evacuation of the gas can be accomplished through the exhaust hole 12 should the second partition wall 11 be integral with or otherwise connected to one of the partition walls 6. As such, there does not appear to be a suggestion in the prior art which would have motivated one of ordinary skill in the art to connect the second partition wall 11 with one of the partition walls 6.

In contrast, claim 2 recites, among other features, "said outermost partition and said non-light emitting zone filling portion *are substantially formed integrally.*" As such, it is respectfully submitted that the combination of Nakano et al. and the Examiner's assertions as to matters of routine skill in the art does not disclose or suggest the invention recited in claim 2.

For similar reasons, it is respectfully submitted that the combination does not disclose the invention recited in claim 3.

By way of review, claim 5 recites, among other features, "a gas exhaust hole is formed at an upper surface of said non-light emitting zone filling portion parallel to a lengthwise direction of said outermost partition." On page 6 of the Office Action, the Examiner asserts that moving a gas exhaust hole 12 from the location disclosed in Nakano et al. to the location recited in claim 5 is obvious based on a doctrine that the mere rearrangement of parts involves only routine skill in the art.

However, in order to maintain an obviousness rejection where the basis is that the mere rearrangement of parts represents a non-obvious improvement, the Examiner is required to provide a motivation as to why one of ordinary skill in the art would have been motivated to rearrange the parts in the recited manner. As explicitly noted in MPEP 2144.04(VI)(C),

The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.

quoting Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

Therefore, the Examiner's assertion that it would have been obvious to form the gas exhaust hole 12 at the upper surface of the second partition wall 11 does not provide evidence as to why one of ordinary skill in the art would have formed the gas exhaust hole 12 in the recited location.

Without this motivation, the Examiner has not provided sufficient evidence to maintain an obviousness rejection.

Additionally, the gas exhaust hole 12 disclosed in Nakano et al. is round as shown in FIG. 2. Therefore, Nakano et al. does not disclose an exhaust hole being formed "parallel to a lengthwise direction of said outermost partition" as recited in claim 5. As such, it is respectfully submitted that Nakano et al. does not disclose or suggest the invention recited in claim 5.

For similar reasons, it is respectfully submitted that the combination does not disclose the invention recited in claims 12 and 23.

Also, the gas exhaust hole 12 disclosed in Nakano et al. is a through hole passing at least through the electrode protective layer 5 so as to allow for the exhaustion of gas. Therefore, even assuming arguendo that the Examiner's assertion is correct in that holes having a depth of 10 μm through 160 μm correspond to a mere optimization of ranges, it is respectfully submitted that Nakano et al. and the Examiner's assertion does not disclose or suggest "a depth of the gas exhaust hole formed at the upper surface" as recited in claim 6.

For similar reasons, it is respectfully submitted that the combination does not disclose the invention recited in claim 13.

On page 7 of the Office Action, the Examiner asserts that FIG. 1 of Nakano et al. discloses that the non-light emitting portion covers end portions of the first electrodes, and that it would have been obvious to select the width of the non-light emitting zone filling portions to be the recited widths of claims 8 and 9 such that the non-light emitting zone filling portion covers end portions of the first electrodes. As a point of clarification and as discussed above in relation to the rejection of claim 7, Nakano et al. does not disclose that the second partition wall 11 covers ends of the line electrodes X, Y. Instead, as shown in Fig. 1, the line electrodes X, Y extend well past the ends of the second partition wall 11.

Further, there is no support in the prior art for the Examiner's assertion that it would have been obvious to modify the second partition wall 11 of Nakano et al. to cover ends of the line electrodes X, Y. There is additionally no evidence of record that one of ordinary skill in the art at the time of the invention would recognize what benefit occurs should the second partition wall 11 cover ends of the line electrodes X, Y as is required to make the asserted combination.

As such, it is respectfully submitted that the combination of Nakano et al. and the Examiner's assertion does not disclose or suggest that "a width of said non-light emitting zone filling portion is equal to a length of the end portions of said first electrodes which extend past said outermost partition" as recited in claim 8, and does not disclose or suggest that "a width of

said non-light emitting zone filling portion is greater than a length of the end portions of said first electrodes which extend past said outermost partition” as recited in claim 9.

For similar reasons, it is respectfully submitted that the Examiner’s combination does not disclose or suggest the invention recited in claims 21, 22.

Additionally, even assuming arguendo that the Examiner is correct as to the assertions on page 8 with respect to claims 10 and 11, since the Examiner’s assertions do not cure the above noted deficiency of Nakano et al. as applied to claim 7 from which claims 10 and 11 depend, it is respectfully submitted that the combination does not disclose or suggest the invention recited in claims 10 and 11.

On pages 8-9 of the Office Action, the Examiner asserts FIG. 4 of Seki et al. (U.S. Patent No. 5,909,261) discloses the features of claim 19. By way of review, FIG. 4 of Seki et al. discloses anode electrodes 9A and cathode electrodes 9K disposed on a dielectric sheet 3 parallel to barrier ribs 10. The electrodes 9A, 9K are disposed opposite an upper substrate 4 on which are disposed data electrodes 5. Since electrodes 9A, 9K are disposed on a same surface as the barrier ribs 10, the electrodes 9A, 9K do not correspond to the recited first electrodes of claim 19.

Further, as explained above with reference to the rejection of claim 15, the line electrodes X, Y of Nakano et al. extend past the seal 10. Additionally, the Examiner has not set forth evidence in either Nakano et al. or Seki et al. as to what would have motivated one of ordinary skill in the art to modify the line electrodes X, Y of Nakano et al. to have the pattern used by the electrodes 9A, 9K in Seki et al.

On page 9 of the Office Action, the Examiner asserts that claim 19 recites a functional limitation. By way of review, claim 19 recites that “each of said first electrodes comprises a terminal end extending to said seal, and a non-terminal end that does not extend to said seal, said non-light emitting zone filling portion and said outermost partition covering the non-terminal end.” It is unclear as to which of these structural limitations is deemed functional since each limitation is set forth with structural limitations. Specifically, while claim 19 recites “covering” and “extending,” each of these terms is not an operation performed by these features, but instead defines a structural relationship as to size and location between recited features such that these terms are not used in a functional manner. As is clear from MPEP §2114, if functional features recited in the body of the claim thereby limit the structure, then the claimed features must be given sufficient weight, searched, and addressed in any rejection of the claim. Thus, it is respectfully submitted that claim 19 does not recite functional limitations, and that the

combination asserted by the Examiner does not disclose or suggest the invention recited in claim 19.

Since Nakano et al. does not disclose or suggest that the second partition walls 11 cover ends of the line electrodes X, Y as discussed above in relation to the rejection of claims 4 and 7, and since Seki et al. is not relied upon as disclosing such a feature, it is respectfully submitted that the combination does not disclose or suggest "said non-light emitting zone filling portion and said outermost partition covering the non-terminal end" as recited in claim 19.

Additionally, even assuming arguendo that the Examiner is correct as to the assertions on pages 9 and 10 with respect to claims 20 and 24-27, since the Examiner's assertions do not cure the above noted deficiency of Nakano et al. as applied to claims 15 and 19 from which claims 20 and 24-27 correspondingly depend, it is respectfully submitted that the combination does not disclose or suggest the invention recited in claims 20 and 24-27.

On page 11 of the Office Action, the Examiner rejects claim 37 under 35 U.S.C. 103 in view of Nakano et al. and Betsui et al. (U.S. Patent No. 6,242,859). The rejection is traversed and reconsideration is requested.

The Examiner asserts that a spacer 40 of Betsui et al. corresponds to the recited outermost one of the partitions extending to a seal as recited in claim 37. By way of review, claim 37 recites, among other features, "partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate," "an outermost one of the partitions extending to said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal." Claim 37 further recites "a fluorescent substance coated between each adjacent pair of said partitions."

In contrast, Betsui et al. discloses the spacer 40 being disposed adjacent a sealing material 25. A space is defined between the spacer 40 and a rib region 23R in which the ribs 23 are disposed. Fluorescent layers 24 are formed between the ribs 23. (Col. 6, lines 64-67, col. 12, lines 35-50; FIGs. 10 and 11 of Betsui et al.) However, as shown in FIGs. 10 and 11, Betsui et al. does not disclose a fluorescent layer 24 adjacent the spacer 40. Therefore, it is respectfully submitted that the spacer 40 of Betsui et al. does not correspond to the recited outermost one of the partitions as recited in claim 37.

Claim 37 has been amended to clarify this feature. However, it is believed that, in view of the claim as a whole, one of ordinary skill in the art would have understood the feature to be included without amendment.

Since Nakano et al. is not relied upon and does not disclose such a feature as discussed

above, it is respectfully submitted that the combination of Nakano et al. and Betsui et al. does not disclose or suggest the invention recited in claim 37.

ATTACHMENT:

Attached hereto is a "Version With Markings to Show Changes Made," comprising a marked-up version of changes made to the Title, specification, and Claims by the current amendment.

CONCLUSION:

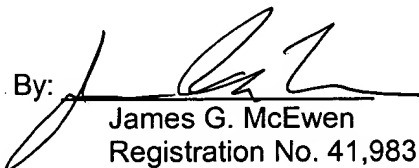
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

By: 
James G. McEwen
Registration No. 41,983

700 Eleventh Street, N.W.
Suite 500
Washington, D.C. 20001
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

Date: April 16, 2003

VERSION WITH MARKING TO SHOW CHANGES MADE

IN THE TITLE:

Please delete the existing title and substitute therefor -- PLASMA DISPLAY PANEL [AND METHOD OF MANUFACTURING] HAVING PARTITIONS [THEREOF]--.

IN THE SPECIFICATION:

Please **AMEND** paragraph 40, as follows:

-- The non-light emitting zone filling portion 61 should be formed such that it can cover each of the end portions of the X electrode 73a and the Y electrode 73b to be formed on the front glass substrate. That is, as shown in FIG. 7, the X electrode 73a and Y electrode 73b are formed in pairs parallel to each other on the front glass substrate 11. One end portion of each of the electrodes 73a, 73b is a terminal connected to an external circuit that starts at the edge of the front glass substrate 11. The other end portion ends at a position corresponding to the space between the outermost partition [61] 23 and the frit glass space 45'. For example, terminals of X electrodes 73a are formed at the left edge of the front glass substrate 11 while terminals of Y electrodes 73b are formed at the right edge of the front glass substrate 11. Also, the other end portion of the X electrode 73a, which is not a terminal, ends at a position corresponding to the space between the outermost partition [61] 23 and the frit glass space 45' at the right side of the substrate, while the other end portion of the Y electrode 73b, which is not a terminal, ends at a position corresponding to the space between the outermost partition [61] 23 and the frit glass space 45' at the left side of the substrate. Thus, even when the non-light emitting zone filling portion 61 is formed close to positions 77a and 77b corresponding to the outermost partitions 61, and the empty space 62 is left between the non-light emitting zone filling portion 61 and the frit glass space 45', the non-light emitting zone filling portion 61 consequently covers all the end portions of the electrodes 73a and 77b disposed between a portion 75 where frit glass (not shown) is coated and the positions 77a and 77b corresponding to the outermost partitions [61] 23. The above structure can prevent mis-discharge between the electrodes located between the frit glass coating position 75 and a position 77 where the partitions are formed.--

IN THE CLAIMS:

Please **CANCEL** claims 14 and 29-36 without prejudice or disclaimer, and **AMEND** claims 1-5, 15, 17, 19, 28, and 37, as follows. The remaining claims are reprinted, as a convenience to the Examiner, as they presently stand before the U.S. Patent and Trademark Office.

1. (ONCE AMENDED) A plasma display panel comprising:
a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said front and rear glass substrates;
first and second electrodes on opposing inner surfaces of said front and rear glass substrates so as to cross each other;
a dielectric layer on each of the opposing inner surfaces of said front and rear glass substrates so as to cover said first and second electrodes;
partitions formed on an upper surface of said dielectric layer of said rear glass substrate and extending lengthwise in a first direction;
red, green and blue fluorescent substances coated between adjacent ones of said partitions; and
a non-light emitting zone filling portion filling a non-light emitting zone defined between an outermost one of said partitions and the sealing material, said non-light emitting zone portion comprising a material used for one of said partitions and having terminal ends defining a length in the first direction which is substantially a length of the outermost partition in the first direction.

2. (ONCE AMENDED) [The plasma display panel as claimed in claim 1] A plasma display panel comprising:
a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said front and rear glass substrates;
first and second electrodes on opposing inner surfaces of said front and rear glass substrates so as to cross each other;
a dielectric layer on each of the opposing inner surfaces of said front and rear glass substrates so as to cover said first and second electrodes;
partitions formed on an upper surface of said dielectric layer of said rear glass substrate;

red, green and blue fluorescent substances coated between adjacent ones of said partitions; and

a non-light emitting zone filling portion filling a non-light emitting zone defined between an outermost one of said partitions and the sealing material, said non-light emitting zone portion comprising a material used for one of said partitions,

wherein said outermost partition and said non-light emitting zone filling portion are substantially formed integrally.

3. (ONCE AMENDED) [The plasma display panel as claimed in claim 1] A plasma display panel comprising:

a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said front and rear glass substrates;

first and second electrodes on opposing inner surfaces of said front and rear glass substrates so as to cross each other;

a dielectric layer on each of the opposing inner surfaces of said front and rear glass substrates so as to cover said first and second electrodes;

partitions formed on an upper surface of said dielectric layer of said rear glass substrate; red, green and blue fluorescent substances coated between adjacent ones of said partitions; and

a non-light emitting zone filling portion filling a non-light emitting zone defined between an outermost one of said partitions and the sealing material, said non-light emitting zone portion comprising a material used for one of said partitions,

wherein said non-light emitting zone filling portion completely fills a space between the sealing material and said outermost partition.

4. (ONCE AMENDED) [The plasma display panel as claimed in claim 1] A plasma display panel comprising:

a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said front and rear glass substrates;

first and second electrodes on opposing inner surfaces of said front and rear glass substrates so as to cross each other;

a dielectric layer on each of the opposing inner surfaces of said front and rear glass substrates so as to cover said first and second electrodes;

partitions formed on an upper surface of said dielectric layer of said rear glass substrate;
red, green and blue fluorescent substances coated between adjacent ones of said
partitions; and

a non-light emitting zone filling portion filling a non-light emitting zone defined between
an outermost one of said partitions and the sealing material, said non-light emitting zone portion
comprising a material used for one of said partitions,

wherein said non-light emitting zone filling portion covers end portions of said first electrodes formed on the front glass substrate.

5. (ONCE AMENDED) [The plasma display panel as claimed in claim 1] A plasma display panel comprising:

a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said front and rear glass substrates;

first and second electrodes on opposing inner surfaces of said front and rear glass substrates so as to cross each other;

a dielectric layer on each of the opposing inner surfaces of said front and rear glass substrates so as to cover said first and second electrodes;

partitions formed on an upper surface of said dielectric layer of said rear glass substrate;
red, green and blue fluorescent substances coated between adjacent ones of said
partitions; and

a non-light emitting zone filling portion filling a non-light emitting zone defined between
an outermost one of said partitions and the sealing material, said non-light emitting zone portion
comprising a material used for one of said partitions,

wherein a gas exhaust hole is formed at an upper surface of said non-light emitting zone filling portion parallel to a lengthwise direction of said outermost partition.

6. (NOT AMENDED) The plasma display panel as claimed in claim 5, wherein a depth of the gas exhaust hole formed at the upper surface is within a range of 10 μm through 160 μm .

7. (NOT AMENDED) A plasma display panel comprising:
a front glass substrate and a rear glass substrate coupled to each other by a sealing material coated at edges of said substrates;

first and second electrodes formed on opposing inner surfaces of said front and rear glass substrates so as to cross each other;

a dielectric layer formed on each of the opposing inner surfaces of said front and rear glass substrates to cover said first and second electrodes;

partitions formed on an upper surface of said dielectric layer of said rear glass substrate; red, green and blue fluorescent substances coated between adjacent ones of said partitions; and

a non-light emitting zone filling portion filling a non-light emitting zone defined between an outermost one of said partitions and the sealing material, said non-light emitting zone filling portion being disposed close to said outermost partition and comprising a material used for one of said partitions,

wherein

an empty space is defined between the sealing material and said non-light emitting zone filling portion, and

said non-light emitting zone filling portion covers end portions of said first electrodes.

8. (NOT AMENDED) The plasma display panel as claimed in claim 7, wherein a width of said non-light emitting zone filling portion is equal to a length of the end portions of said first electrodes which extend past said outermost partition.

9. (NOT AMENDED) The plasma display panel as claimed in claim 7, wherein a width of said non-light emitting zone filling portion is greater than a length of the end portions of said first electrodes which extend past said outermost partition.

10. (NOT AMENDED) The plasma display panel as claimed in claim 9, wherein a sum of the width of said non-light emitting zone filling portion and a width of said outermost partition is 1.0 mm, and a length of the end portion of each of said first electrodes covered by said non-light emitting zone filling portion and said outermost partition is 0.3 mm.

11. (NOT AMENDED) The plasma display panel as claimed in claim 7, wherein said first electrodes extend past said non-light emitting zone filling portion where a width of the empty space is less than 50 μ m.

12. (NOT AMENDED) The plasma display panel as claimed in claim 7, wherein a gas exhaust hole is formed on an upper surface of said non-light emitting zone filling portion parallel to a lengthwise direction of said outermost partition.

13. (NOT AMENDED) The plasma display panel as claimed in claim 12, wherein a depth of the gas exhaust hole from the upper surface is between 10 μm and 160 μm .

14. (CANCELLED)

15. (ONCE AMENDED) A plasma display panel, comprising:
a front glass substrate having first electrodes over which a first dielectric layer is formed;
a rear glass substrate disposed opposite said front glass substrate, said rear glass substrate having second electrodes over which a second dielectric layer is formed, the second electrodes not being parallel with the first electrodes;
a seal connecting corresponding edges of said front and rear glass substrates;
partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate;
a fluorescent substance coated between said partitions; and
a non-light emitting zone filling portion disposed between an outermost one of said partitions and said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal,
wherein said seal is disposed such that at least one of opposing ends of each of the first electrodes is disposed between said seal and said partitions.

16. (NOT AMENDED) The plasma display panel of claim 15, wherein said outermost partition and said non-light emitting zone filling portion comprise the same material.

17. (ONCE AMENDED) [The plasma display panel of claim 15] A plasma display panel, comprising:
a front glass substrate having first electrodes over which a first dielectric layer is formed;
a rear glass substrate disposed opposite said front glass substrate, said rear glass substrate having second electrodes over which a second dielectric layer is formed, the second electrodes not being parallel with the first electrodes;

a seal connecting corresponding edges of said front and rear glass substrates;
partitions formed on an upper surface of the second dielectric layer between the edges of
said rear glass substrate;

a fluorescent substance coated between said partitions; and
a non-light emitting zone filling portion disposed between an outermost one of said
partitions and said seal so as to prevent a discharge of the first electrodes in a space between
said outermost partition and said seal,

wherein said non-light emitting zone filling portion is connected to and has a same height as said outermost partition.

18. (NOT AMENDED) The plasma display panel of claim 17, wherein said non-light emitting zone filling portion fills the space between said outermost partition and said seal.

19. (ONCE AMENDED) [The plasma display panel of claim 15] A plasma display panel, comprising:

a front glass substrate having first electrodes over which a first dielectric layer is formed;
a rear glass substrate disposed opposite said front glass substrate, said rear glass
substrate having second electrodes over which a second dielectric layer is formed, the second
electrodes not being parallel with the first electrodes;

a seal connecting corresponding edges of said front and rear glass substrates;
partitions formed on an upper surface of the second dielectric layer between the edges of
said rear glass substrate;

a fluorescent substance coated between said partitions; and
a non-light emitting zone filling portion disposed between an outermost one of said
partitions and said seal so as to prevent a discharge of the first electrodes in a space between
said outermost partition and said seal,

wherein each of said first electrodes comprises:
 a terminal end extending to said seal, and
 a non-terminal end that does not extend to said seal, said non-light emitting zone filling portion and said outermost partition covering the non-terminal end.

20. (NOT AMENDED) The plasma display panel of claim 19, wherein the non-terminal end extends past said non-light emitting zone filling portion when a width of an empty space between said seal and said non-light emitting zone filling portion is less than 50 μ m.

21. (NOT AMENDED) The plasma display panel of claim 19, wherein the non-terminal end extends past said outermost partition and into but not through said non-light emitting zone filling portion.

22. (NOT AMENDED) The plasma display panel of claim 19, wherein the non-terminal end extends past said outermost partition, through said non-light emitting zone filling portion, but does not extend into a space defined between said non-light emitting zone filling portion and said seal.

23. (NOT AMENDED) The plasma display panel of claim 15, wherein said non-light emitting zone filling portion and the first dielectric layer define a gas removal channel through which gas is removed from the plasma display panel.

24. (NOT AMENDED) The plasma display panel of claim 15, wherein said non-light emitting zone filling portion and said seal define a gas removal channel through which gas is removed from the plasma display panel.

25. (NOT AMENDED) The plasma display panel of claim 24, wherein the gas removal channel is defined by approximately one half of a space between said outermost partition and said seal.

26. (NOT AMENDED) The plasma display panel of claim 25, wherein the space between said outermost partition and said seal has a width of 20 mm, and the gas discharge channel has a width of 10 mm.

27. (NOT AMENDED) The plasma display panel of claim 23, wherein another gas removal channel is defined between said non-light emitting zone filling portion and said seal.

28. (ONCE AMENDED) [The plasma display panel of claim 15] A plasma display panel, comprising:

a front glass substrate having first electrodes over which a first dielectric layer is formed;

a rear glass substrate disposed opposite said front glass substrate, said rear glass substrate having second electrodes over which a second dielectric layer is formed, the second electrodes not being parallel with the first electrodes;

a seal connecting corresponding edges of said front and rear glass substrates;
partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate;

a fluorescent substance coated between said partitions; and
a non-light emitting zone filling portion disposed between an outermost one of said partitions and said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal,

further comprising an inert gas disposed within the plasma display panel except between the space defined between said outermost partition and said seal.

29-36. (CANCELLED)

37. (ONCE AMENDED) A plasma display panel, comprising:
a front glass substrate having first electrodes over which a first dielectric layer is formed;
a rear glass substrate disposed opposite said front glass substrate, said rear glass substrate having second electrodes over which a second dielectric layer is formed, the second electrodes not being parallel with the first electrodes;
a seal connecting corresponding edges of said front and rear glass substrates;
partitions formed on an upper surface of the second dielectric layer between the edges of said rear glass substrate, an outermost one of the partitions extending to said seal so as to prevent a discharge of the first electrodes in a space between said outermost partition and said seal; and
a fluorescent substance coated between each adjacent pair of said partitions.